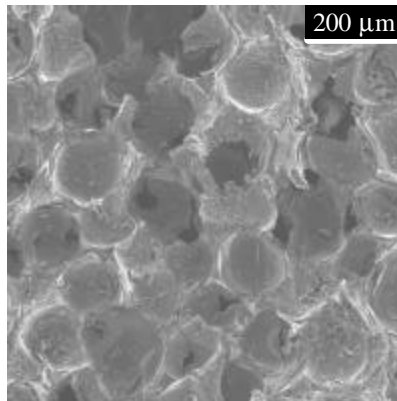
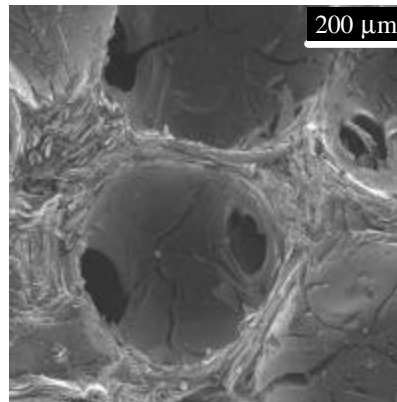


High Thermal Conductivity Graphite Foams

Domestic Precursor
Conoco Mesophase
FOAM A



Foreign Precursor
AR mesophase
FOAM B



Physical Properties

	ORNL Foam A	ORNL Foam B	Aluminum 6061	
Density	0.58	0.56	2.88	g/cm ³
Porosity	0.73	0.75	0	
Fraction Open Porosity	0.98	0.98	0	
Coefficient of Thermal Expansion	--	2	17	ppm/°C
Max Operating Temperature in Air	500	500	600	°C

Mechanical Properties

Tensile Strength	--	0.69	180	MPa
Compressive Strength	5.0	3.45	--	MPa
Compressive Modulus	0.18	0.144	70	GPa

Thermal Properties

Bulk Thermal Diffusivity	3.11	4.53	0.81	cm ² /s
Bulk Thermal Conductivity	127	175	180	W/m-K
Specific Heat Capacity	691	691	890	J/Kg·K
Bulk Specific Thermal Conductivity	218	313	63	(W/m-K)/(g/cm ³)



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